

## ADDITIONS TO THE GENUS *CALLISCARTA* (HOMOPTERA: CICADELLIDAE)<sup>1, 2</sup>

Paul H. Freytag<sup>3</sup>

ABSTRACT: Additions to the genus *Calliscarta* include *C. richardsi* sp. n. from Brazil, the females of *C. boliviana* (Osborn) and *C. stigmata* (Nast) and the male of *C. rugosa* Freytag. Also, *C. columbiana* (Nast) and *C. stigmata* (Nast) are recorded from Panama.

Additional leafhopper specimens belonging to the subfamily Neobalinae add to our knowledge of the Genus *Calliscarta*. The material was obtained from Dr. William J. Knight, British Museum of Natural History, (BMNH), London, England; Dr. Luis J. Jolly T. and Marco Gaiani, Museo Instituto de Zoología Agrícola, Universidad Central de Venezuela, MIZA, Maracay, Venezuela; Dr. Henk Wolda, Smithsonian Tropical Research Institute, (STRI), Balboa, Panama; and Dr. K.G.A. Hamilton, Biosystematics Research Institute, Canada Department of Agriculture, (BRIC), Ottawa, Canada. I wish to thank these persons for making this material available.

The following information is added to that found in the revision of the genus *Calliscarta* Stal (Freytag, 1988):

### *Calliscarta columbiana* (Nast)

*Idiotettix columbiana* Nast 1952, p. 2.

One male, collected from Panama, extends the known distribution of this species. Also, the label data gives the first host association of any of the species of this subfamily. The data is as follows: PANAMA, Canal Zone, Pipeline Road, from *Luhea scemanni*, 12-26-VII- 1976, Henk Wolda (STRI).

### *Calliscarta stigmata* (Nast)

(Figure 11)

*Idiotettix stigmatus* Nast 1952, p. 2.

One female collected from Panama, extends the distribution and

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<sup>3</sup>Department of Entomology, University of Kentucky, Lexington, Kentucky 40546-0091.

represents the first female associated with the males of this species. The color pattern is the same as in the male, so the female is fairly easily recognized even though it is slightly larger. The label data is as follows: PANAMA, Coclé Province, La Mesa near El Valle, 8°37' N., 80°07' W, 850 m., 21-VII- 1979, Stockwell (STRI).

Female genitalia: Seventh sternum enlarged, posterior margin with a rounded median emargination. Ovipositor extending only slightly more than its own width beyond pygofer.

Notes: This specimen is not in excellent condition, as the genitalia are somewhat damaged and shrunken. The illustration is slightly modified so that it looks symmetrical. One additional male was also collected from VENEZUELA, Aragua, carret. Maracay, Chorróni, 17-VI-1975, R.E. Dietz leg. (MIZA).

### *Calliscarta boliviana* (Osborn)

(Figure 9)

*Idiotettix bolivianus* Osborn 1929, p. 466.

Six additional specimens, five males and one female, collected from Chiriqui Province, Panama, includes the first female associated with the males of this species.

Female genitalia: Seventh sternum enlarged, posterior margin with relatively large rounded median emargination. Ovipositor extending twice its width beyond pygofer.

Specimen data: PANAMA, Chiriqui Province, two males, Fortuna, 1050 m., 8°44'N 82°15'W, 19-V-1978, Henk Wolda (STRI and University of Kentucky); one female, same data except 12-17-August-1976 (STRI); one male, Boquete, 1250 m., 8°48'N 82°26'W, 2-VII-1975, Henk Wolda (STRI); one male, same data except 10-X-1977 (STRI); one male, Dst. Renacimiento, Oeste Clara, 5500 m., 5-VII-1976, Engleman (STRI).

### *Calliscarta rugosa* Freytag

(Figures 5-8)

*Calliscarta rugosa* Freytag 1988, p. 78.

One additional female has been collected from the type locality, with data as follows: VENEZUELA, Aragua, El Limon, 450 m., 12-XI-1976, Luz de Mercurio, F. Fernandez Y. Col. (MIZA); and one male, VENE-

ZUELA, Trujillo, Cuicas, 12-VIII-1964, E. Osuna & M. Gelbos (MIZA), which fits the color pattern of the female is here described as the male of this species.

Male with same color pattern as female. Male 9.5 mm. in length.

Male genitalia: Pygofer elongate, parallel sided to near apex, apex with sharply pointed, dorsally projecting, spine-like process. Genital plate large, long, paddle-shaped, same length as pygofer. Style long, slender, bent at right angle subapically, apex sharply pointed. Aedeagus short, stout, apex narrowed to blunt point, curved slightly dorsad, with a pair of ventral processes, each expanded at base, flattened, pointed at apex, extending nearly to base of aedeagus.

Note: The male is not from the same area as the females, but since the color pattern is so close to the females it is expected that this is the proper association.

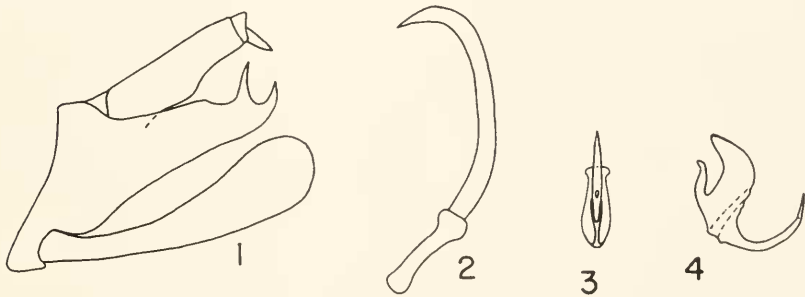
*Calloscarta richardsi* n. sp.

(Figures 1-4 and 10)

Length of male 9.0-9.2 mm.; female 10.0 mm.

Head wider than pronotum, crown between eyes more than four times wider than median length. Ocelli three times their own width from eyes.

Head purple brown with four transverse orange red bands, lora and postclypeus yellow, sutures below antennae margined with black. Pronotum mostly orange red, with posterior, lateral margins, median extension from posterior margin nearly to head, and anterior lateral spot on each side, purple brown. Forewings mostly smoky brown with large yellow spots, four on clavus, four on corium; apical area dark brown, with a crescent-shaped series of light brown spots. Ventral side and legs yellow, male with some brown shading on legs.



**RICHARDSI**

Figures 1-4. *Calloscarta richardsi* sp. n. 1. Lateral view of male genital segments. 2. Latero-ventral view of style. 3. Lateral view of aedeagus. 4. Ventral view of aedeagus.

**Male genitalia:** Pygofer elongate, apex with large bifurcate process. Genital plate large, paddle-shaped, same length as pygofer. Style long, narrow, sickle-shaped, pointed at apex. Aedeagus short, stout, flattened laterally, knife-shaped, pointed at apex. Aedeagus short, stout, flattened laterally, knife-shaped with a long, narrow, median ventral process with bifurcate apex (difficult to see in ventral view).

**Female genitalia:** Seventh sternum enlarged with a shallow rounded median emargination. Ovipositor extending its own width beyond pygofer.

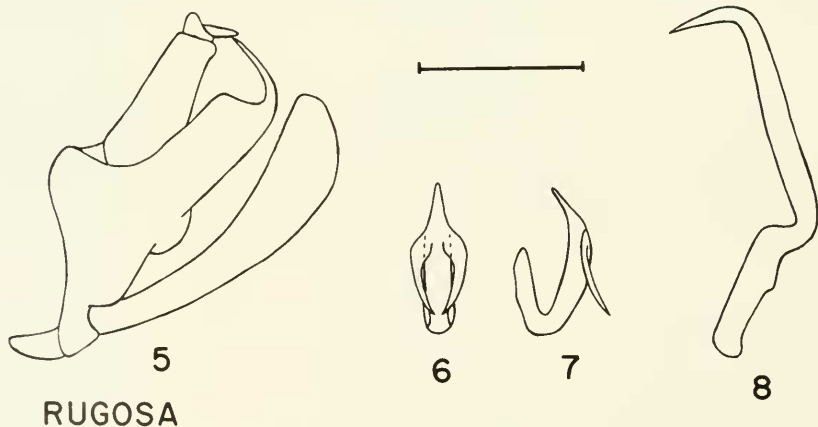
**Holotype male:** BRAZIL, Mato Grosso, 12°50'S., 51°47'W., Camp, 28-X-1968, O.W. Richards, Roy. Soc. & Roy. Geog. Soc. Expedition 1967-1969, B M 1968-260 (BMNH). Allotype female: Same data as holotype except, 11-XII-1968, W.J. Knight, B M 1970-192 (BMNH). Paratypes: Two males, same data as holotype except, one 11-IX-1968 (University of Kentucky).

**Note:** This species is similar to *boliviana* in having a bifurcate apical process on the male pygofer, however, the aedeagus is quite different with the median, long, bifurcate ventral process. In the key to species (Freitag, 1988) this species will key out to *boliviana*. It is an honor to name this species for the collector of the type, Dr. O.W. Richards a well known entomologist.

### *Calliscarta ornata* Freitag

*Calliscarta ornata* Freitag 1988, p. 73.

One additional female has been collected, and is labeled: VENEZUELA, T.F. Amazonas, Dpt. Rio Negro, S. Carlos de R. Negro, 65 m., 1°55'N, 67°1'W., 4-14-III-1984, J.A. Celarajo & J. Demarmels (MIZA).

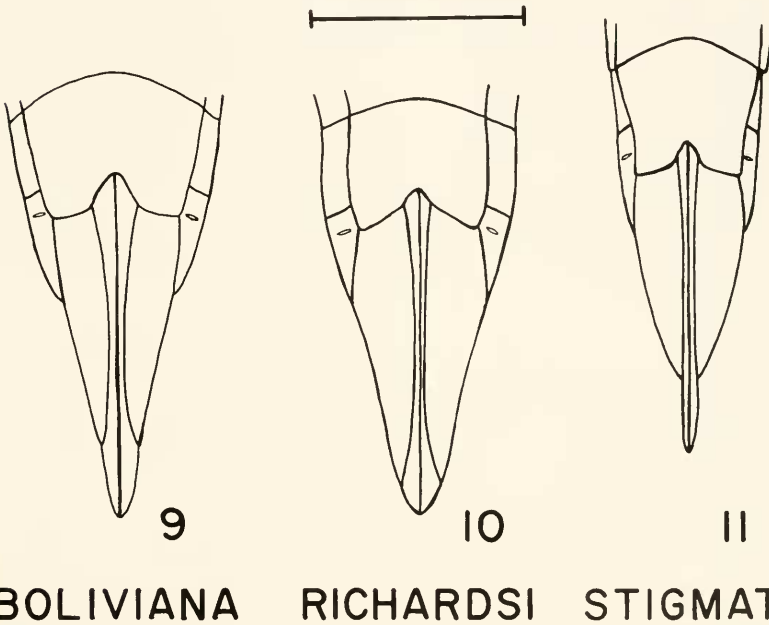


Figures 5-8. *Calloscarta rugosa* Freitag. 5. Lateral view of male genital segments. 6. Ventral view of aedeagus. 7. Lateral view of aedeagus. 8. Lateroventral view of style. All drawn to the same scale; scale equals 1 mm.

*Calliscarta decora* (Fabricius)

*Cicada decora* Fabricius 1803, p. 69.

Two additional males have been collected, one labeled: VENEZUELA, T.F. Amazonas, Dpt. Rio Negro, S. Carlos de R. Negro, 65 m., 1°55'N, 67°1'W, 21-23-XI-1984, E. Osuna & A. Chacon (MIZA); and one labeled: GUYANA, Itun, 29-VI-1970, B. Fenton Coll. (BRIC).



Figures 9-11. Ventral view of female genital segments. 9. *Calliscarta boliviana* (Osborn). 10. *C. richardsi* sp. n. 11. *C. stigmata* (Nast). All drawn to the same scale; scale equals 2 mm.

## LITERATURE CITED

- Freytag, Paul H. 1988. Revision of the Genus *Calliscarta* (Homoptera: Cicadellidae: Neobalinae). In "Research in the Auchenorrhyncha, Homoptera: A Tribute to Paul W. Oman". Great Basin Naturalist Memoirs 12: 67-81.